EXHIBIT 59

3Com® Switch 4500 Quick Reference Guide

About the Web Interface

This guide details the commands available on the Web and the Command Line Interfaces. The tables contained in this document reference the CLI commands and the equivalent Web Interface menu items that allow the same configuration to be made using the web interface.

About the Command Line Interface

To use the command line interface (CLI) of your unit, please refer to the following points for assistance:

- When initially accessing the CLI, press Enter when prompted. The User View displays. This is indicated by the chevron brackets around the name of the unit at the prompt, for example, `<4500>`.
- In System View, square brackets appear around the name of the unit at the prompt, for example, `[4500]`.
- You must be in the System View menu to access the configurable CLI commands.
- Some commands can be entered directly at any prompt from anywhere in the interface.
- If you enter part of a command followed by a **?** (with no space between), the CLI will show you all the commands that begin in that way.
- **To display command parameters:**
  At the prompt, enter the name of the command followed by a space and **?**. For example:

  `<4500>boot ?`

  The following parameters are displayed:

  ```
  boot-loader
  bootrom
  ```

  `<4500>`

  To specify boot loader, enter the command as follows:

  `<4500>boot boot-loader ?`

  You only need to enter **?** if parameters exist for the command.
- **To display parent menus:**
  At the prompt, enter **`quit`**.
- **To display the User View menu:**
  Press <CTRL+Z>.
- **To obtain help:**
  At the prompt, enter **?**.
- The term ‘view’ may be used interchangeably with the term ‘menu’.
- The **`undo`** command is placed before the command you wish to undo, for example, **`undo set authentication`** password.
- <CTRL+A> places the cursor back to the start of the command line.
- Enter the first few characters of a command and press TAB to enter the full command without having to input the entire command (where there is only one command that starts with the entered characters).
- Use the Up Arrow key at the prompt to repeat the previous command string.
- Use Delete to delete the character after the cursor; Backspace deletes the character before the cursor.
- When entering physical port numbers, Enter the port number as **`x/0/z`**, where x is the unit number and z is the physical port number.

Further Information

For further information about how to use the command line interface, refer to the Command Reference Guide and the Configuration Guide, which are both available as PDF documents on the CD that accompanied the unit.

Menus

This section provides a summary of menus and commands supported by the agent for each of the supported hardware platform variants. Any matching web commands available in the web interface are also shown.

Commands marked with '*' are available on the Switch 4500 PWR only.

Table 1 Command Line Editing

<Ctrl+A>	Moves the cursor to the start of the command line
<Tab>	Command completion

Table 2 Commands Available in Any View

Command	Description	Web Command
?	Help	
display	Display current system information	
display acl	View detailed configuration information about the ACL	
display am	View the status of access management function	
display arp	View the ARP mapping table	
display arp timer aging	View the current setting of the dynamic ARP map aging timer	
display boot-loader	View the APP file used for this boot and the one that will be used at next boot	
display channel	View details about the information channel	
display clock	View the date and time	
display config-agent	View statistics of the configuration agent	
display connection	View the connection information of all or specified users	
display cpu	Display the occupancy of the CPU	
display current-configuration	Display the current configuration parameters	
display debugging	View the enabled debugging process	
display device	Display device information	
display dhcp client	View detailed information about address allocation to DHCP client	
display dhcp-server	View information about DHCP server group	
display dhcp-server interface vlan-interface	View information about the DHCP server group corresponding to the VLAN interface	
display diagnostic-information	View the current configuration information about all running modules	
display domain	View the configuration of ISP domains	
display dot1x	View the relevant information of 802.1x	
display fan	View the working state of the built-in fans	
display fib	View the summary of the Forwarding Information Base	
display fib ip_address	View the FIB entries matching a destination IP address (range)	
display fib acl	View the FIB entries matching a specific ACL	
display fib ip-prefix	View the FIB entries matching a specific prefix list	
display fib statistics	View the total number of FIB entries	
display ftm route	Display Fabric topology management route	
display ftm information	Display Fabric topology management information	
display ftm topology database	Display Fabric topology management database	
display ftp-server	View the parameters of the current FTP server	
display ftp-user	View the parameters of current FTP user	

Command	Description	Web Command
display history-command	View the saved history of commands	
display icmp statistics	View the statistics information about ICMP packets	
display igmp-snooping configuration	View IGMP snooping configuration information	
display igmp-snooping group	View IP multicast groups and MAC multicast groups	
display igmp-snooping statistics	View the statistics information on IGMP snooping	
display info-center	View the configuration of system log and the information recorded in the memory buffer	
display interface	View port configuration information	**Port -> Statistics**
display interface vlan-interface	View the information about specified or all VLAN interfaces	
display ip host	View all the host names and the corresponding IP addresses	
display ip interface vlan-interface	View the information of an IP interface	
display ip ip-prefix	View the IP address prefix list	
display ip socket	Display the information about the sockets in the current system	
display ip statistics	View the statistics information about IP packets	
display ip routing-table	View the routing table summary	
display ip routing-table X.X.X.X	View the routing information of the specified destination address	
display ip routing-table X.X.X.X X.X.X.X	View the routing information in the specified destination address range	
display ip routing-table acl	View the route filtered through specified basic access control list (ACL)	
display ip routing-table ip-prefix	View the route information that passed the filtering rule according the input ip prefix list name	
display ip routing-table protocol	View the route information of specified protocol	
display ip routing-table radix	View radix tree of routing table	
display ip routing-table statistics	Summary statistics of all routes	
display ip routing-table verbose	Detail information of routing table	
display isolate port	View port isolation information	
display lacp system-id	View actor system ID	
display link-aggregation interface	View detailed link aggregation information at a designated port	
display link-aggregation summary	View summary information of all aggregation groups	
display link-aggregation verbose	View detailed information of a designated port	
display local-user	View the relevant information of all (or specified) local users	
display local-server statistics	View the configuration information of local RADIUS server group	
display loopback-detection	View if port loopback detection has been enabled and details	
display mac-address	View MAC address table information	
display mac-address aging-time	View the aging time of the dynamic entry in the MAC address table	
display mac-authentication	Display the global information on centralized MAC address authentication	
display memory	Display memory information	
display mirror	View port mirroring configuration	

Command	Description	Web Command
display ntp sessions	NTP connection	
display ntp status	NTP status and configuration information	
display ntp trace	Trace the time synchronization information	
display packet-filter interface	View active ACL interface information	
display packet-filter unit id	View active ACL unit identifier	
display password-control	Display password-control information	
display password-control blacklist	Display blacklist information	
display password-control super	Display super user's password-control information	
display poe disconnect*	Display PoE Disconnect Mode	
display poe interface*	Specify interface e1, 0, n	
display poe powersupply*	Display PoE Power Supply Status	
display port	View ports where link type is Hybrid, Trunk, or a combination	
display power	View the working state of the built-in power supply	
display qos cos-local-precedence-map	View "COS->Local-precedence" map	
display qos-interface [x]	View QoS setting information of all interfaces. X = unit number or interface information (E1,0,1)	
display qos-interface [x] line-rate	View the parameter setting of traffic rate limitation in the interface output direction. X = unit number or interface information (E1,0,1)	
display qos-interface [x] mirrored-to	View the settings of the traffic mirro X= unit number or interface information (E1, 0, 1)r	
display qos-interface [x] traffic-limit	View the settings of traffic limit. X= unit number or interface information (E1,0,1)	
display radius	View the configuration information of all RADIUS server groups or a specified one	
display radius statistics	View the statistics information of RADIUS packet	
display remote ping	Display the remote-ping test historay and the latest test results.	
display remote-ping history	Display remote-ping history table	
display remote-ping results	Display remote-ping results table	
display rip	View the current RIP running state	
display rmon alarm	View RMON alarm information	
display rmon event	View RMON events	
display rmon eventlog	View RMON event log	
display rmon history	View the latest RMON history sampling information	
display rmon prialarm	Display alarm information about extended RMON	
display rmon statistics	View RMON statistics	
display route-policy	View the configured route policy	
display router id	Display the router's ID	
display rsa local-key-pair public	Display local key pair and public key of the server	
display rsa peer-public-key	Display a designated RSA public key	
display saved-configuration	View configuration files stored in flash memory of the Switch	
display schedule reboot	Display the configuration of the schedule reboot terminal service parameters of the current router	
display snmp-agent	View information about the SNMP-agent engine ID of current device	
display snmp-agent community	View the currently configured community names	

Command	Description	Web Command
display snmp-agent group	View group name, safe mode, state of various views and storage modes	
display snmp-agent mib-view	View the MIB view configuration information of the Switch	
display snmp-agent statistics	View current state of SNMP communication	
display snmp-agent sys-info	View the system information of SNMP configuration	
display snmp-agent usm-user	View information of all the SNMP usernames in the group username list	
display ssh server status	Display the SSH server status information	
display ssh server session	Display SSH server session information	
display ssh server-info	Display SSH Server information	
display ssh user-information	Display information of about the user, including username, corresponding key, and authentication type	
display startup	Display configuration filenames used for system start-up.	
display stop-accounting-buffer radius-scheme	View the stop accounting buffer radius-scheme requests	
display stop-accounting-buffer session id	Display the stop accounting session identifier	
display stop-accounting-buffer time-range	View the stop accounting time range	
display stop-accounting-buffer user-name	Display the stop accounting user name	
display tcp statistics	View the statistics information about TCP packets	
display tcp status	View the TCP connection state	
display this	Display the running configuration of the current view	
display udp-helper server	View the information of destination Helper server corresponding to a VLAN interface	
display udp statistics	View UDP traffic statistic information	
display unit	View information about the port in a specific unit. Specify unit number and interface.	
display user-interface	View information about the user interface	
display users	View information about the current user interface	
display version	Display software version, issue date and the basic hardware configurations	
display voice vlan oui	Display the OUI address supported by the current system	
display voice vlan status	Display information about Voice VLAN features	
display vlan	View information about the specified or all VLANs	
display xrn-fabric	View the information of the entire xrn fabric	
quit	Exit from current command view	
super	Assign user a higher user level.	
return	Return to user view from any view other than user view	
tracert	Check the network routes and troubleshoot the network	

Table 3 User View

<4500>

Command	Description	Web Command
boot boot-loader	Specify the application file (.app) used for booting the Switch	
boot bootrom	Upgrade bootrom	
cd	Change the current directory	
clock datetime	Configure the current date and time	
clock summer-time	Configure summer time on the Switch	

Command	Description	Web Command
clock timezone	Configure local timezone	
copy	Copy from one file to another	
debugging	Enable system debugging functions	
debugging arp packet	Enable ARP debugging	
debugging dhcp client	Enable DHCP client debugging	
debugging dhcp-relay	Enable DHCP relay debugging	
debugging lacp packet	Enable LACP packets debugging at a designated port or ports	
debugging lacp state	Enable LACP state machines debugging on a designated port or ports	
debugging link-aggregation error	Enable link aggregation errors debugging	
debugging link-aggregation event	Enable link aggregation events debugging	
debugging mac-authentication event	Enable the centralized MAC address authentication debugging switch	
debugging ssh server	Display debugging information in running SSH	
debugging udp-helper	Enable UDP Helper debugging	
delete	Delete a file	
dir	List files on a file system	
display snmp-agent local-engineid	Display the engine ID of the local SNMP entity	
display system-guard	Display system-guard module options	
fabric save-unit-id	Save Unit ID	
format	Format the storage device on the Switch	
free user-interface	Reset a specified user interface	
ftp	Establish control connection with the remote FTP Server and enter FTP Client View (See Table 10, "FTP Client View," on page 13)	
language-mode	Specify the language environment	
lock	Lock current user terminal interface	
mkdir	Create a new directory	
more	Display the contents of a file	
move	Move the file	
ping	ping another station	
pwd	Display current working directory	
reboot	Reset switch	**Administration -> Reboot**
rename	Rename a file	
reset acl counter	Clear ACL statistics	
reset arp	Reset ARP mapping entries	
reset counters interface	Reset statistical information on the port	
reset dot1x statistics	Reset 802.1x statistics information	
reset igmp-snooping statistics	Reset IGMP Snooping statistics information	
reset ip statistics	Clear IP statistics information	
reset lacp statistics	Clear LACP statistics at a designated port or all ports	
reset logbuffer	Reset information in log buffer	
reset password-control history-record	Reset password history record	
reset password-control history-record super	Reset the super user's password controls	
reset password-control blacklist	Delete infomation in blacklist	

Command	Description	Web Command
reset radius statistics	Clear the statistic information related to the RADIUS protocol	
reset recycle-bin	Delete contents of recycle bin	
reset saved-configuration	Delete configuration files	**Administration -> Initialize**
reset stop-accounting-buffer	Delete the stopping accounting requests from the buffer according to the specified RADIUS server name	
reset stp	Clear statistics for STP	
reset tcp statistics	Clear TCP statistics information	
reset trapbuffer	Reset information in trap buffer	
reset udp statistics	Clear UDP statistics information	
rmdir	Delete an existing directory	
save	Save current configuration	**Save Configuration**
schedule reboot at	Schedule a reboot of the Switch at specified time	
schedule reboot delay	Configure the Switch to be rebooted after a specified time delay	
send	Send information to other user terminal interface	
startup bootrom-access enable	Enable BOOTROM access	
startup saved-configuration	Configure the configuration file used for starting the system	**Administration -> Restore Configuration**
system-view	Enter the system view (See Table 4, "System View," on page 7)	
telnet	Establish one Telnet connection	
terminal debugging	Configure to display the debugging information on the terminal	
terminal logging	Enable terminal log information display	
terminal monitor	Enable the log debugging/log/trap on the terminal monitor	
terminal trapping	Enable terminal trap information display	
tftp get	Download a file from the specified directory of the TFTP server	**Administration -> Restore Configuration**
tftp put	Upload a file from the Switch to the specified directory on the TFTP server	**Administration -> Backup Configuration**
undelete	Recover a deleted file	
undo	Cancel the current setting	
xmodem	Establish an xmodem connnection	

Table 4 System View

<4500>**sys**

Command	Description	Web Command
acl number	Define ACL identified by a number or a name, and then enter the corresponding ACL view (See Table , "[4500]rip ," on page 17)	**Device -> ACL** **Security-> Authorized IP**
am enable	Enable the access management function	
am trap enable	Enable the access management trap	
arp check enable	Enable the checking of ARP entries	
arp static	Configure the static ARP mapping entries in an ARP mapping table	
arp timer aging	Configure the dynamic ARP aging timer	
change unit-id	Change the ID of the Switch	
change self-unit	Change the ID of the Switch	
command-privilege level	Specify the command level	
copy configuration	Copy source port configuration to destination port	
cut connection	Disconnect a user or a category of users by force	

Command	Description	Web Command
delete static-routes all	Delete all the static routes	**Device -> IP Route**
dhcp-server [x] ip	Configure the IP address of the DHCP Server used by the DHCP Server group. X= group number	
domain	Configure an ISP domain or enter the view of an existing ISP domain	
dot1x	Specify 802.1x configuration information	
dot1x authentication-method	Specify authentication method for 802.1x users	
dot1x dhcp-launch	Trigger system authentication when receiving DHCP packet(s)	
dot1x max-user	Specify maximal on-line user number per port	
dot1x port-control	Specify port authenticated status	
dot1x port-method	Specify port controlled method	
dot1x quiet-period	Enable quiet period timer	
dot1x retry	Specify maximal request times	
dot1x supp-proxy-check	Check whether user(s) access the networks by proxy or not	
dot1x timer	Specify timer parameters	
dot1x timer handshake-period	Set the handshake period of 802.1x	
end-station polling ip-address	Configure the Switch to periodically test specified end-stations by sending PING packets	
execute	Run the batch file	
fabric-port [x] enable	Specify the fabric port of the Switch. Specify x = Gig interface	**Port -> Administration**
file prompt	Modify prompt modes of file operations	
ftm stacking-vlan	Specify the stacking VLAN of the Switch	**Device -> XRN Fabric**
ftp server	Start or shutdown the FTP server	
ftp timeout	Configure the FTP connection timeout interval	
header	Define the login banner	
igmp-snooping enable	IGMP snooping enable	**Device -> IGMP Snooping**
igmp-snooping disable	IGMP snooping disable	
igmp-snooping host-aging-time	Configure the port aging time of the multicast group members	
igmp-snooping max-response-time	Configure the maximum response time for a query	
igmp-snooping router-aging-time	Configure the router port aging time of IGMP Snooping	
info-center channel name	Rename a channel	
info-center console channel	Configure the channel through which log information is output to the console	
info-center enable	Enable the system log	
info-center logbuffer	Configure to output information to the memory buffer	
info-center monitor channel	Configure the channel to output the log information to the user terminal	
info-center snmp channel	Specify new channel for transmitting the SNMP information	
info-center source	Add or delete a record to the information channel	
info-center switch-on	Turn on the information synchronization on the specified Switch	
info-center timestamp	Configure the timestamp output format in debugging/trap information	
info-center trapbuffer	Output information to the trap buffer	
interface Gig Ethernet	Enter Ethernet Port View (See Table 15, "Ethernet Port View," on page 15)	
interface vlan-interface	Enable VLAN interface and enter VLAN interface view (See Table 14, "VLAN Inteface View," on page 14)	**Device -> VLAN Interface Administration -> IP Setup**
ip host	Configure the host name and the host IP address	

Command	Description	Web Command
ip http	Configure HTTP	**Security -> Authorized IP**
ip ip-prefix	Configure an address prefix list or one of its items	
ip route-static	Configure a static route	**Device -> IP Route**
lacp system-priority	Configure LACP system priority value	**Port -> LACP**
link-aggregation group [x] description	Configure a descriptor for an aggregation group	**Port -> Link Aggregation**
link-aggregation group [x] mode	Create a manual or static aggregation group. X=1-32	**Port -> Link Aggregation**
local-server	Specify local RADIUS server configuration information	
local-user	Specify local user configuration and enter local-user view (See Table 5, "Local-user View," on page 11)	**Administration -> System Access**
local-user password-display-mode	Specify password display mode	
loopback-detection enable	Enable port loopback detection	
loopback-detection interval-time	Configure the detection interval for the external loopback condition of each port	
mac-address	Configure MAC address	
mac-address timer	Configure the aging time of the Layer-2 dynamic address table entry	
mac-authentication	Enable the centralized MAC address authentication feature on a specified port or globally	
mac-authentication authmode	Specify MAC authenticate authmode config	
mac-authentication authpassword	Specify the fixed password	
mac-authentication authusername	Specify the fixed username	
mac-authentication domain	Configure the ISP domain used by the centralized MAC address authentication user	
mac-authentication timer	Configure timer parameters of the centralized MAC address authentication	
memory auto-establish	Free memory for routing protocols to run normally	
memory limit	Specify the memory limit	
memory safety	Display memory safety	
ntp-service access	NTP access control	
ntp-service authentication	Authenticate NTP timie source	
ntp-service authentication-keyid	Specify NTP authentication keyid	
ntp-service max-dynamic-sessions	Specify the maximum connections	
ntp-service reliable	Specify trusted keyid of NTP	
ntp-service source-interface	The interface correcponding to the sending NTP packet	
ntp-service unicast-peer	Specify the NTP peer	
ntp-service unicast-server	Specify the NTP server	
password-control	Specify password controls	
password-control super	Super user's password controls	
poe disconnect*	Set PoE disconnect mode	
poe legacy enable*	Enable Legacy detection	
poe power-management*	Power Management	
poe update*	Update PoE firmware	
private-group-id	Tunnel Private Group ID attribute description mode	
qos cos-local-precedence-map	Configure "CoS Local-precedence" mapping table	
radius nas-ip	Specify the source address of the RADIUS packet sent from NAS	

Command	Description	Web Command
radius scheme	Specify RADIUS configuration information and enter the RADIUS view (See Table 11, "RADIUS Server Group View," on page 13)	
remote-ping	Specify the remote-ping test class	
remote-ping-agent enable	Enable a remote-ping client	
return	Return to user view from any view other than user view	
rip	Enable RIP and enter RIP view (See Table 17, "RIP View," on page 17)	
rmon alarm	Add an entry to the alarm table	
rmon event	Add an entry to the event table	
rmon prialarm	Add an entry to the extended RMON alarm table	
route-policy	Specify a route policy and enter route policy view (See Table 16, "Route Policy View," on page 16)	
rsa local-key-pair create	Create local RSA host key pair and server key pair	
rsa local-key-pair destroy	Remove all RSA key pairs at the server, including host key pair and Server key pair	
rsa peer-public-key	Enter the public key view (See Table 8, "Public Key Edit View," on page 12)	
set unit "[name]"	Set the unit number name. "[name]"= text string	
sftp server enable	Enable SFTP Server	
snmp-agent community	Configure community access name and access to SNMP	**Administration -> SNMP -> Community String**
snmp-agent group	Configure an SNMP group	**Administration -> SNMP -> Group**
snmp-agent local-engineid	Configure a name for a local or remote SNMP engine on the Switch	
snmp-agent mib-view	Create or update the view information	
snmp-agent packet max-size	Specify the size of an SNMP packet	
snmp-agent sys-info	Configure system information of running SNMP	
snmp-agent target-host	Configure destination of SNMP notification	**Administration -> SNMP -> Traps**
snmp-agent trap enable	Enable/disable the device to send Trap messages	**Administration -> SNMP -> Traps**
snmp-agent trap life	Configure the timeout of Trap packets	
snmp-agent trap queue-size	Configure the information queue length of Trap packets sent to the destination host	
snmp-agent trap source	Configure the source address for sending Trap packets	
snmp-agent usm-user	Configure users in an SNMP group	**Administration -> SNMP -> Users**
ssh2	Establish one telnet connection	
ssh client (SSH server IP address or name) assign rsa-key (key name)	Assign the SSH client an RSA Key	
ssh client first-time enable	Set SSH client attribute of authenticating user for the first time access	
ssh server authentication-retries (number of retries, 1-5)	Define SSH authentication retry times value	
ssh server timeout (value in seconds, 1-120)	Define timeout value for SSH registration authentication	
ssh user (username) service-type sftp	Set SSH User service types, either stelnet, sft, or all. All is both stelnet and sftp.	
ssh user (sername) assign rsakey (key name)	Associate an existing public key with a designated user	

Command	Description	Web Command
ssh user (username) authentication-type (authenticaltion type)	Define an authentication type for a designated user; either password, RSA, or public key.	
stp	Enable Spanning Tree Protocol	**Device -> Spanning Tree**
stp bpdu-protection	Enable BPDU protection	**Device -> Spanning Tree**
stp mcheck	Force the port to work in RSTP mode	
stp mode	Configure the RSTP running mode	**Device -> Spanning Tree**
stp pathcost-standard	Standard to be used for calculating the default Path Cost	
stp priority	Configure the bridge priority of the Switch	**Device -> Spanning Tree**
stp root primary	Configure the current switch as the primary root of a spanning tree	**Device -> Spanning Tree**
stp root secondary	Configure the current switch as a secondary root of a specified spanning tree	**Device -> Spanning Tree**
stp timeout-factor	Configure multiple of hello time	
stp timer forward-delay	Configure the time of forward delay	**Device -> Spanning Tree**
stp timer hello	Configure hello time for Switch	**Device -> Spanning Tree**
stp timer max-age	Configure the max age of the Switch for judging stp packets	**Device -> Spanning Tree**
super password level	Configure a password for changing the user from a lower user level to a higher user level	
sysname	Specify the name of the Switch	**Administration -> SNMP -> Setup**
system-guard	Configure the System-guard feature	
tcp timer fin-timeout	Configure the TCP finwait timer	
tcp timer syn-timeout	Configure the TCP synwait timer	
tcp window	Configure size of transmission and receiving buffers of connection-oriented socket	
tftp-server	Configure the TFTP server	
udp-helper enable	Enable UDP Helper function	
udp-helper port	Configure the UDP port with relay function	
user-interface	Configure the user terminal interface and enter the view (See Table 6, "User-interface view," on page 12)	
vlan	Configure VLAN and enter VLAN view (See Table 13, "VLAN View," on page 14)	**Device -> VLAN**
voice vlan	Globally enable the Voice VLAN features of one VLAN	**Device -> Voice VLAN**
voice vlan aging	Configure the aging time of Voice VLAN	**Device -> Voice VLAN**
voice vlan mac_address	Set the MAC address that the Voice VLAN can control	**Device -> Voice VLAN**
voice vlan mode auto	Set the Voice VLAN in auto mode	**Device -> Voice VLAN**
voice vlan security enable	Enable the Voice VLAN security mode	**Device -> Voice VLAN**
web set-package	Change the default web source file name	
xrn-fabric authentication-mode	Configure authentication mode of the fabric	**Device->XRN Fabric**

Table 5 Local-user View

`[4500]`**`local-user admin`**

Command	Description	Web Command
attribute	Configure some attributes for specified local user	**Administration -> System Access**
level	Configure user priority level	**Administration -> System Access**
password password-control aging	Specify password aging	**Administration -> System Access**
password-control length	Specify password length	

Command	Description	Web Command
service-type	Configure a service type for a particular user	
state	Configure the state of the current user	

Table 6 User-interface view

`[4500]`**`user-interface 1`**

Command	Description	Web Command
acl	Reference ACL and implement the ACL control to the TELNET users	**Security -> Authorized IP**
authentication-mode	Configure local password authentication method	
auto-execute command	Configure to automatically run a specified command after a user logs on	
databits	Configure the data bits for AUX (Console) port	
flow-control	Configure the flow control mode on AUX (Console) port	
history-command max-size	Configure the size of the history command buffer	
idle-timeout	Configure the timeout function	
parity	Configure the parity mode on AUX (Console) port	
protocol	Set user interface protocol	
screen-length	Configure how many lines can be displayed on a screen of the terminal	
set authentication password	Configure the password for local authentication	**Administration -> System Access**
shell	Enable terminal service of a user interface	
speed	Specify the transmission rate on the AUX (Console) port in bit/s	
stopbits	Configure the stop bits on the AUX (Console) port	
user privilege level	Configure which level of command a user can use after logon from a specific user interface	

Table 7 VTY User-interface View

`[4500]`**`user-interface 1 integer (0-12)`**

`[4500]`**`user-interface 1 aux`**

`[4500]`**`user-interface 1 vty`**

Command	Description	Web Command
protocol inbound	Configure the protocols supported by a designated user interface	

Table 8 Public Key Edit View

`[4500]`**`rsa peer-public-key switchxxx`**
(where **xxx** is the Switch number)

Command	Description	Web Command
public-key-code begin	Enter public key edit view (See Table 8, "Public Key Edit View," on page 12)	
public-key-code end	Save the configured public key and return to the public key view	

Table 9 Public Key View

Command	Description	Web Command
peer-public-key end	Finish editing peer public key and quit from public key view to system view	

Table 10 FTP Client View

`<4500>`**`ftp xxx.xxx.xxx.xxx`**
(where **`xxx.xxx.xxx.xxx`** is the IP address of the FTP server)

Command	Description	Web Command
`ascii`	Configure FTP data transmission mode as ASCII mode	
`binary`	Configure FTP data transmission mode as binary mode	
`bye`	Disconnect with the remote FTP Server and return to user view	
`cd`	Change the working path on the remote FTP server	
`cdup`	change working path on the FTP server to the next level up in the directory structure	
`close`	Terminate the control connection and data connection with the FTP Server and remain in FTP client view	
`debugging`	Enable the system debugging functions	
`delete`	Delete a file on the FTP server	
`dir`	Query a file or display the contents of current working directory	
`disconnect`	Disconnect FTP client side from FTP server side without exiting FTP client view	
`get`	Download a remote file and save it locally	
`lcd`	View local working path of FTP client	
`ls`	Query a file or display the contents of current working directory	
`mkdir`	Create a directory on the FTP server	
`open`	Open FTP connection	
`passive`	Configure the data transmission mode as passive mode (passive mode is the default data transmission mode)	
`put`	Upload a local file to the FTP server	
`pwd`	View the current directory on the FTP server	
`quit`	Terminate the connection with the FTP server and return to user view	
`remotehelp`	View help text about FTP commands	
`rmdir`	Delete a specified directory from the FTP server	
`user`	Register an FTP user	
`verbose`	Enable verbose (verbose is enabled by default)	

Table 11 RADIUS Server Group View

`[4500]`**`radius scheme 1`**

Command	Description	Web Command
`accounting optional`	Enable the selection of RADIUS accounting option	
`data-flow-format`	Configure the unit of data flow that send to RADIUS Server	
`key`	Configure encryption key for RADIUS authentication/ authorization or accounting packet	**Security -> RADIUS Client**
`nas-ip`	Set the source IP address of the network access server (NAS, i.e: the Switch), so that all packets destined for the RADIUS server carry the same source IP address	
`primary accounting`	Configure the IP address and port number for the primary accounting server	
`primary authentication`	Configure the IP address and port number for the primary RADIUS authentication/authorization	
`retry`	Configure retransmission times of RADIUS request packet	
`retry realtime-accounting`	Configure the maximum times of real-time accounting request failing to be responded	

Command	Description	Web Command
retry stop-accounting	Configure the maximal retransmission times after stopping accounting request	
secondary accounting	Configure the IP address and port number for the second RADIUS accounting server	
secondary authentication	Configure the IP address and port number for the second RADIUS authentication/authorization	**Security -> RADIUS Client**
server-type	Configure the supported RADIUS server types	
state	Configure the state of RADIUS server	
stop-accounting-buffer enable	Configure to save the stopping accounting requests without response in the Switch system buffer	
timer	Configure RADIUS server response timer	
timer quiet	Specify the wait time for re-activating primary server	
timer realtime-accounting	Configure the real-time accounting interval	
timer response-timeout	Configure the RADIUS server response timer	
user-name-format	Configure the username format sent to RADIUS server	

Table 12 ISP Domain View

`[4500]`**`domain test`**

Command	Description	Web Command
access-limit	Configure a limit to the amount of supplicants in the current ISP domain	
accounting optional	Enable the selection of RADIUS accounting option	
idle-cut	Configure the user template in the current ISP domain	
messenger	Specify messenger service of domain	
radius-scheme	Configure the RADIUS server group used by the current ISP domain	
scheme	Configure the AAA scheme to be referenced by the current ISP domain	
self-service-url	Specify self-service URL (Uniform Resource Locator) of domain	
state	Configure the state of the current ISP domain	

Table 13 VLAN View

`[4500]`**`vlan 2`**

Command	Description	Web Command
description	Configure a description for the current VLAN or VLAN interface	**Device -> VLAN**
igmp-snooping	IGMP snooping	
port	Add ports to or delete ports from VLAN	**Device -> VLAN**

Table 14 VLAN Inteface View

`[4500]`**`interface vlan 2`**

Command	Description	Web Command
description	Configure a description for the current VLAN or VLAN interface	
dhcp-server	Configure corresponding DHCP Server Group of a VLAN Interface	
enable snmp trap	Enable SNMP traps on an interface	
ip address	Configure an IP address for VLAN interface	**Administration -> IP Setup -> Device -> VLAN Interface**

Command	Description	Web Command
ip address dhcp-alloc	Configure a VLAN interface to obtain IP address using DHCP	**Administration -> IP Setup -> Device -> VLAN Interface**
rip authentication-mode	Configure RIP-2 authentication mode and its parameters	
rip input	Allow an interface to receive RIP packets	
rip metricin	Configure the additional route metric added to the route when an interface receives RIP packets	
rip metricout	Configure the additional route metric to the route when an interface transmits RIP packets	
rip output	Allow an interface to transmit RIP packets to the network	
rip split-horizon	Configure an interface to use split horizon when transmitting RIP packets	
rip version	Configure the RIP version of RIP packets on an interface	
rip work	Enable the running of RIP on an interface	
shutdown	Disable the VLAN interface	**Device -> VLAN Interface**
udp-helper server	Configure the relay destination server	

Table 15 Ethernet Port View

`[4500]interface ethernet 1/0/1`

Command	Description	Web Command
am ip-pool	Configure the IP address pool for access management on a port	
arp static	Configure the static ARP mapping entries in an ARP mapping table	
broadcast-suppression	Configure the broadcast traffic size enabled on port	**Port -> Administration**
description	Configure name for a port	
dot1x max-user	Specify maximal on-line user number per port	
dot1x port-control	Specify port authenticated status	
dot1x port-method	Specify port controlled method	
dot1x supp-proxy-check	Check whether user(s) access the networks by proxy or not	
duplex	Configure the duplex mode of the port	**Port -> Administration**
enable snmp trap	Enable/disable current port to transmit the LINK UP and LINK DOWN trap information	
flow-control	Enable flow control on the Ethernet port	**Port -> Administration**
lacp enable	Enable LACP	**Port -> LACP**
lacp port-priority	Configure port priority value	**Port -> LACP**
line-rate	Limit the total rate of the packets delivered by interfaces	
loopback	Configure the Ethernet port to perform the loopback test	**Tools -> Loopback**
loopback-detection control enable	Enable loopback detection control function on a trunk or hybrid port	
loopback-detection enable	Enable port loopback detection	
loopback-detection per-vlan enable	Configure loopback detection on all VLANs on trunk and hybrid ports	
mac-address blackhole	Backhole entry, no age, can be added or deleted, and is saved to the configuration file	
mac-address dynamic	Dynamic entry, age, can be added or deleted, and is lost after reset	
mac-address max-mac-count	Limit the number of MAC addresses to be learned by an Ethernet port	**Port -> Administration**
mac-address static	Static entry, no age can be added or deleted, and is saved to the configuration file	
mac-authentication	Enable the centralized MAC address authentication feature on a specified port or globally	

Command	Description	Web Command
mdi	Configure the network cable type of the Ethernet ports	**Port -> Administration**
mirrored-to	Enable ACL traffic identification and perform traffic mirror	
mirroring-port	Configure a monitored port	**Port -> Mirroring**
monitor-port	Configure a monitor port	**Port -> Mirroring**
multicast-suppression	Configure the multicast traffic size enabled on port	
packet-filter	Activate ACL	
poe enable*	Enable PoE	
poe max-power*	Maximum Power	**Device -> PoE**
poe mode*	Port Mode	
poe priority*	Port Priority	
port access vlan	Join the access port to a specified VLAN	**Port -> Administration**
port hybrid pvid vlan	Configure the default VLAN ID of the hybrid port	**Port -> Administration**
port hybrid vlan	Join the hybrid port to specified existing VLAN	**Port -> Administration**
port isolate	Add a port to an isolation group	**Port -> Administration**
port link-aggregation group	Add an Ethernet port into a manual or static aggregation group	
port link-type	Configure the link type of Ethernet port	**Port -> Administration**
port trunk permit vlan	Join trunk port to specified VLAN	
port trunk pvid vlan	Configure the default VLAN ID of trunk port	
priority	Configure the priority of Ethernet port	
priority trust	Configure system trusting the packet 802.1p priority and not replacing the 802.1p priorities carried by the packets with the port priority	
rmon history	Add an entry to the history control table	
rmon statistics	Add an entry to the statistic table	
shutdown	Disable the port	**Port -> Administration**
speed	Configure the port speed	**Port -> Administration**
stp	Enable Spanning Tree Protocol	**Port -> Spanning Tree Per Port**
stp cost	Configure the path cost on a spanning tree for the current Ethernet port	**Port -> Spanning Tree Per Port**
stp disable	Disable spanning tree protocol on the port	
stp edged-port	Configure the current port as an edge port	**Port -> Spanning Tree Per Port**
stp loop-protection	Enable loop protection function	**Port -> Spanning Tree Per Port**
stp mcheck	Force the port to work in RSTP mode	**Port -> Spanning Tree Per Port**
stp point-to-point	Configure the link to the current port as point-to-point link or not point-to-point link	**Port -> Spanning Tree Per Port**
stp port priority	Configure the priority of the current Ethernet port	**Port -> Spanning Tree Per Port**
stp root-protection	Enable Root protection	**Port -> Spanning Tree Per Port**
stp transmit-limit	Set the maximum number of STP packets the current port can send within one Hello time	**Port -> Spanning Tree Per Port**
unicast-suppression	Configure the limit to unknown unicast flooding	
voice vlan enable	Enable the Voice VLAN features on the port	
wred	Configure WRED parameters	

Table 16 Route Policy View

`[4500]`**`route-policy policy 1 permit node 1`** Specify name, action and node to see the options below

Command	Description	Web Command
apply cost	Configure the route cost value of route information	
apply tag	Set a tag field of the matched route	

Command	Description	Web Command
if-match acl	Configure the IP address range to match the acl	
if-match IP	Configure the IP address range to match the IP	
if-match IP-prefix	Configure the IP address range to match the IP prefix	
if-match tag	Configure the IP address range to match the tag	
if-match cost	Configure one of the match rules of route-policy to match the cost of the routing information	
if-match interface	Set to match route whose next hop is designated interface	
if-match ip next-hop	Configure one of the match rules of route-policy on the next hop address of the routing information	

Table 17 RIP View

[4500]**rip**

Command	Description	Web Command
checkzero	Perform the checkzero operation in the zero field of RIP-1	
default cost	default routing cost of an imported route	
host-route	Enable receiving host-routes	
filter-policy	Spcify a route filtering policy	
import-route	Import routes from other protocols into RIP	
network	Enable routing protocol on the related network or interface	
peer	Specify a peer route	
preference	Specify an RIP route preference	
reset	Reset RIP configuration	
summary	Enable RIP-2 automatic route summarization	
timers	Config RIP timers	

Table 18 ACL View

[4500]**acl number xxxx**
(where **xxxx** is the acl number)

Command	Description	Web Command
description	Specify the ACL description	
rule	Add a subrule to an ACL	**Device -> ACL** **Security -> Authorized IP**

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